

REMARKS

This application has been reviewed in light of the Final Office Action dated May 28, 2003. Claims 1-84, 86-105, and 107-122 are pending in this application. Claim 106 has been cancelled, without prejudice or disclaimer of the subject matter presented therein. Claims 21, 28, 92, and 97 have been amended to correct typographical errors, and Claim 111 has been amended to remove its dependency from cancelled Claim 106. Claims 101, 113-115, 120, and 121, are independent claims which have been amended to define still more clearly what Applicants regard as their invention. Support for these amendments can be found, for example, on page 18, lines 23-25 of the specification. No new matter has been added. Favorable reconsideration is requested.

Applicants gratefully acknowledge the allowance of Claims 1-84, 86-100, 102-105, 107-110, and 112.

Claim 106 has been objected to under 37 C.F.R. § 1.75 as being a substantial duplicate of Claim 101. This objection has been rendered moot by the cancellation of Claim 106.

Claim 122 has been rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Specifically, the phrase "the uneven geometry is formed by multiplying one cycle of the depression with random cycles of the depressions different from the one cycle" is allegedly not disclosed in the specification.

As indicated in the Supplemental Amendment dated March 5, 2003, support for Claim 122 can be found in Embodiments 1 and 4 and Figs. 3 and 5 of the application. In addition, Applicants respectfully direct the Examiner's attention to page 60, lines 4-20 of the specification, which provides further support for Claim 122. Applicants believe that the rejection under Section 112, first paragraph, has been obviated, and its withdrawal is

therefore respectfully requested.

Claims 101, 106, 111, 113-118, 120, and 121 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,181,870 to Stevens (hereafter "Stevens"). The rejection of Claim 106 is rendered moot, since this claim has been cancelled.

Independent Claim 101 is directed to an electron beam apparatus comprising a hermetic container which includes an electron source having electron emission devices and targets exposed to the electrons emitted from the electron source. The apparatus further comprises a first member within the hermetic container that has an uneven geometry at least on a part of its surface. The uneven geometry constituting of amplitudes of at least two kinds of unevenness and the uneven geometry have an opening region which is not covered or closed.

Independent Claim 113 recites an electron beam apparatus comprising a hermetic container which includes an electron source having electron emission devices and targets exposed to electrons emitted from the electron source. The apparatus further comprises a first member within the hermetic container, wherein the first member is provided with an uneven geometry on at least a part of its surface, and the uneven geometry is substantially comprised of a plurality of depressions, wherein the depressions are arranged along varied directions on the surface, and the depressions are not covered or closed.

Independent Claim 114 is directed to an electron beam apparatus comprising a hermetic container which includes an electron source having electron emission devices and targets exposed to electrons emitted from the electron source. The apparatus further comprises a first member within the hermetic container, wherein the first member is provided with an uneven geometry on at least a part of its surface, and the

uneven geometry is substantially comprised of a plurality of depressions, wherein the depressions have various amplitudes, and the depressions are not covered or closed.

Independent Claim 115 recites an electron beam apparatus comprising a hermetic container which includes an electron source having electron emission devices and targets exposed to electrons emitted from the electron source. The apparatus further comprises a first member within the hermetic container, wherein the first member is provided with an uneven geometry on at least a part of its surface, and the uneven geometry being substantially comprised of a plurality of depressions, and wherein the depressions have various pitches, and the depressions are not covered or closed.

Independent Claim 120 recites an electron beam apparatus comprising a hermetic container which includes an electron source having electron emission devices and targets exposed to electrons emitted from the electron source. The apparatus further comprises a first member within the hermetic container, wherein the first member is provided with an uneven geometry on at least a part of its surface, and the uneven geometry being substantially comprised of a plurality of depressions, wherein there is a multiplicity of cycles of the depressions, and the depressions are not covered or closed.

Independent Claim 121 recites an electron beam apparatus comprising a hermetic container which includes an electron source having electron emission devices and targets exposed to electrons emitted from the electron source. The apparatus further comprises a first member within the hermetic container, wherein the first member is provided with an uneven geometry on at least a part of its surface, and the uneven geometry is substantially comprised of a plurality of depressions, wherein there is a multiplicity of amplitudes of the depressions, and the depressions are not covered or closed.

The changes to Claims 101, 113-115, 120, and 121 are supported by, e.g., page 18, lines 23-25 of the specification, and have been made merely to further clarify the

claimed subject matter. An opening or depression is exposed to an inside (vacuum) or a chamber, that is "not covered or closed", thereby forming a desired uneven surface geometry which reduces an incident angle dependency coefficient of secondary electron emission coefficient and which restricts multiple emissions of the secondary electrodes.

Stevens relates to an electron gun assembly for use in a color television picture tube, for preventing a grey scale imbalance in the screen of the tube during operation. Three electron guns 54, 56, and 58 are contained in a neck 46 of tube 2, and are electrically connected to pins 66 through base 68, and emit electrons 60, 62, and 64. At col. 5, lines 10-16, Stevens refers to a unitized in-line gun in which common electrodes 26, 28, 32, 34, 36, and 38 have on each side thereof at least one pair of widely spaced, relatively narrow claws embedded at widely spaced points in a wide bead 50.

Unlike the present invention as described in Claims 101, 113-115, 120, and 121, Stevens does not teach or suggest a first member provided with an uneven geometry at least on a part of its surface. For this reason alone, Claims 101, 113-115, 120, and 121 are believed patentably distinguishable over Stevens.

In addition, Claim 101 provides that the uneven geometry has "amplitudes of at least two kinds of unevenness." This further distinguishes Claim 101 over Stevens, since Stevens does not teach or suggest an uneven geometry having amplitudes of at least two kinds of unevenness, let alone an uneven geometry.

Claims 113-115, 120, and 121 are also further distinguishable over Stevens since the uneven geometry is substantially comprised of a plurality of depressions. Again, there is no teaching or suggestion of a plurality of depressions by Stevens.

The Office Action asserts that, in Stevens, a bead 50 (first member) having embedded claws is provided with an uneven geometry. However, these features of Stevens are not seen to teach or suggest an uneven geometry as recited in the foregoing independent

claims, let alone an uneven geometry constituting of amplitudes of at least two kinds of unevenness and having an opening region which is not covered or closed, as recited in Claim 101, or a plurality of depressions that are not covered or closed, as recited in Claims 113-115, 120, and 121. Indeed, the Stevens embedded claws apparently are closed or covered in their environment.

Accordingly, for the foregoing reasons, Applicants submit that Independent Claims 101, 113-115, 120, and 121 are patentable over Stevens.

The other rejected claims in this application, i.e., Claims 111, and 116-118, depend from one or another of the independent claims discussed above, and, therefore, are submitted to be patentable for at least the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, individual consideration or reconsideration, as the case may be, of the patentability of each claim on its own merits is respectfully requested.

This Amendment After Final Action is believed clearly to place this application in condition for allowance and, therefore, its entry is believed proper under 37 C.F.R. § 1.116. Accordingly, entry of this Amendment After Final Action, as an earnest effort to advance prosecution and reduce the number of issues, is respectfully requested. Should the Examiner believe that issues remain outstanding, it is respectfully requested that the Examiner contact Applicants' undersigned attorney in an effort to resolve such issues and advance the case to issue.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and allowance of the present application.

In addition, Applicants respectfully request that the Examiner acknowledge consideration of the references cited in the Information Disclosure Statement filed on November 8, 2001, by returning an initialed copy of Form PTO-1449. A copy of the above

mentioned Information Disclosure Statement is included with this Amendment After Final Action for the Examiner's convenience.

Applicants' undersigned attorney may be reached in our New York Office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address listed below.

Respectfully submitted,



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